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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/775,999	02/02/2001	Paul Stiros	8412	7441

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EXAMINER

CHORBAJI, MONZER R

ART UNIT	PAPER NUMBER
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1744

DATE MAILED: 12/30/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	<b>Application No.</b> 09/775,999	<b>Applicant(s)</b> STIROS ET AL.	
	<b>Examiner</b> MONZER R. CHORBAJI	<b>Art Unit</b> 1744	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 14 October 2005.
- 2a) ☒ This action is **FINAL**.                      2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 21-41 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 21-41 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 01 June 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
a) ☐ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

### DETAILED ACTION

**This final action is in response to the amendment received on 10/14/2005**

#### ***Claim Rejections - 35 USC § 103***

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

3. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

4. Claims 21-26, 28-31, 33, 35-39 and 40-41 are rejected under 35 U.S.C. 103(a) as being unpatentable over Aibe et al (U.S.P.N. 5,288,306) in view of Arnold, III (U.S.P.N. 4,995,556).

With respect to claims 21 and 35, the Aibe reference discloses a system and a method for deodorizing air in a confined place (col.1, lines 6-21) including the following: providing a passive filter member (figure 1:6) that is capable of removing malodor from air without the assistance of an air moving member (in col.18, lines 52-56, the Aibe reference teaches that the air deodorizing apparatus may not include a fan when the gas can flow into the apparatus. Looking at figure 17, gas to be treated is capable of flowing into gas inlet means 122. This teaching is not limited to one embodiment only since the Aibe reference teaches that any deodorizing apparatus of the reference may not include a fan), it includes a first filter element (figure 17: 127), the first filter element contains a first filter medium that includes iodine supporting activated carbon honeycomb (col.17, lines 17-18), providing a forced air filter member (figure 23: 194) having an air flow path from an air inlet to an air outlet (figure 23: 192 and 193), the forced air filter member has a second filter element (figure 23: 196) and an air moving member (figure 23: 198), the second filter element includes a second filter medium, which contains an acid-supporting activated carbon honeycomb (col.21, lines 53-55), the air moving member is capable of moving air along the air flow path and through the second filter medium (col.21, lines 46-49), the detachable passive filter member is interchangeable with the second filter element in the forced air filter member (in col.5, lines 16-18, the Aibe reference teaches that one or multiple activated carbon

honeycombs can be used in the deodorizing device thereby the honeycombs can be placed either in devices without fan or in devices with fan as taught in col.18, lines 52-55 and col.11, lines 61-64), positioning the passive filter member inside a confined space (col.18, lines 52-55 and col.2, lines 50-51), positioning the forced air filter member inside the confined space (figure 23: the unlabeled apparatus in placed in refrigerator as taught in col.2, lines 50-51), neutralizing odor in the air of the confined space by allowing air to come into proximity with the first filter member (col.18, lines 52-55 and col.2, lines 50-51), neutralizing odor in the air of the confined space by drawing air toward the acid-supporting activated carbon honeycomb in the second filter member (figure 23: the unlabeled apparatus in placed in refrigerator as taught in col.2, lines 50-51) and the passive filter member is interchangeable with the second filter element in the forced air filter member (in col.5, lines 16-18, the Aibe reference teaches that one or multiple activated carbon honeycombs can be used in the deodorizing device thereby the honeycombs can be placed either in devices without fan or in devices with fan as taught in col.18, lines 52-55 and col.11, lines 61-64). Furthermore, interchanging the passive filter member in place of the second filter element in the forced air filter member feature does not further limit the scope of the claims. It is construed as intended use. However, with respect to claims 21 and 35, the Aibe reference fails to teach using sodium bicarbonate and the combined use of passive filter and forced air filter. With respect to claims 21 and 35, the Arnold reference, which is in the art of deodorizing air in refrigerators, teaches placing passive filter member that includes sodium bicarbonate in a refrigerator (col.1, lines 7-10 and col.2, lines 3-4). Thus, it would have been obvious

to one having ordinary skill in the art at the time the invention was made to modify the method and apparatus of the Aibe reference by substituting one known deodorizer such as sodium bicarbonate as taught by the Arnold reference for another known deodorizers such as iodine or bromine or platinum as taught by the Aibe reference since the mechanism for odor elimination of sodium bicarbonate relies largely on the adsorption of odors from the atmosphere by the compound (col.1, lines 54-58).

With respect to claims 21 and 35, the Arnold reference fails to teach combining the use of passive filter and forced air filter. However, it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the method and apparatus of the Aibe reference by utilizing the teachings of the Arnold reference to the Aibe reference in order to maximize the rate of deodorization of air inside refrigerators by combining passive and active deodorizers.

With respect to claim 40, the Aibe reference discloses a system for deodorizing air in a confined place (col.1, lines 6-21) including a passive filter member (figure 1:6) that is capable of removing malodor from air without the assistance of an air moving member (in col.18, lines 52-56, the Aibe reference teaches that the air deodorizing apparatus may not include a fan when the gas can flow into the apparatus. Looking at figure 17, gas to be treated is capable of flowing into gas inlet means 122. This teaching is not limited to one embodiment only since the Aibe reference teaches that any deodorizing apparatus of the reference may not include a fan), includes a first filter element (figure 17: 127). The Aibe reference teaches the following: the first filter element contains a first filter medium that includes iodine supporting activated carbon

honeycomb (col.17, lines 17-18), a forced air filter member (figure 23: 194) having an air flow path from an air inlet to an air outlet (figure 23: 192 and 193), the forced air filter member has a second filter element (figure 23: 196) and an air moving member (figure 23: 198), the second filter element includes a second filter medium, which contains an acid-supporting activated carbon honeycomb (col.21, lines 53-55), the air moving member has a housing (figure 23:191) and is capable of moving air along the air flow path and through the second filter medium (col.21, lines 46-49), the passive filter member is interchangeable with the second filter element in the forced air filter member (in col.5, lines 16-18, the Aibe reference teaches that one or multiple activated carbon honeycombs can be used in the deodorizing device thereby the honeycombs can be placed either in devices without fan or in devices with fan as taught in col.18, lines 52-55 and col.11, lines 61-64) and the second filter element is detachable from the air moving member (figure 23, 196 and 198). The second filter element (figure 23:196) is capable of sitting on the exterior surface of the housing (figure 23:191) in operation of the forced air filter member. In lines 13-14, applicant recites the feature "to sit on the exterior portion of the housing". This feature is construed as intended use and does not limit the scope of claim 40. However, the Aibe reference fails to teach the use of sodium bicarbonate. The Arnold reference, which is in the art of deodorizing air in refrigerators, teaches placing passive filter member that includes sodium bicarbonate in a refrigerator (col.1, lines 7-10 and col.2, lines 3-4). Thus, it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the system of the Aibe reference by substituting one known deodorizer such as sodium bicarbonate as

taught by the Arnold reference for another known deodorizers such as iodine or bromine or platinum as taught by the Aibe reference since the mechanism for odor elimination of sodium bicarbonate relies largely on the adsorption of odors from the atmosphere by the compound (col.1, lines 54-58).

With respect to claim 41, the Aibe reference discloses an apparatus for deodorizing air (col.1, lines 6-21) that includes the following: a forced air filter member (figure 23: 194) having an air flow path from an air inlet to an air outlet (figure 23: 192 and 193), the forced air filter member has a filter element (figure 23: 196) and an air moving member (figure 23: 198) has a housing (figure 23:191) and is capable of moving air along the air flow path and through the second filter medium (col.21, lines 46-49), the filter element includes a filter medium, which contains an acid-supporting activated carbon honeycomb (col.21, lines 53-55), the air moving member has a housing (figure 23:191) and the filter element is detachable from the air moving member (figure 23, 196 and 198). The filter element (figure 23:196) is capable of sitting on the exterior surface of the housing (figure 23:191) in operation of the forced air filter member. However, the Aibe reference fails to teach the use of sodium bicarbonate. The Arnold reference, which is in the art of deodorizing air in refrigerators, teaches placing passive filter member that includes sodium bicarbonate in a refrigerator (col.1, lines 7-10 and col.2, lines 3-4). Thus, it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the apparatus of the Aibe reference by substituting one known deodorizer such as sodium bicarbonate as taught by the Arnold reference for another known deodorizers such as iodine or bromine or platinum as



taught by the Aibe reference since the mechanism for odor elimination of sodium bicarbonate relies largely on the adsorption of odors from the atmosphere by the compound (col.1, lines 54-58).

With respect to claims 22-23 and 36-37, the Aibe reference uses passive filter members and second filter members that are of the same shape and size (figure 1:6 and 7).

With respect to claims 24-26, the Aibe reference teaches the following: the filter member (figure 12: 82) includes a cartridge (figure 13: 86) which has a top portion and a bottom portion (figure 12, such parts of 86 are not labeled), also the cartridge has air inlets in its top (figure 12, top portion of 86 is not labeled) and air outlets on its bottom (figure 12, bottom portion of 86 is not labeled), the air moving member (figure 12, the lower part of 82 which includes fan 90) has a top portion (serves as a base for the filter member) with an air inlet therein (figure 12, top portion of the lower part of 82 on which 89 lies directly above) , the cartridge (figure 13: 86) sits on the top portion of the air moving member such that the air outlets on the bottom of the cartridge partially in alignment with the air inlet on the air moving member and the air moving member includes a fan (figure 12: 90).

With respect to claims 28-29, the Aibe reference fails to teach the use of sodium bicarbonate as a deodorizing agent placed in an air pervious container or a bag; however, the Arnold reference teaches placing sodium bicarbonate in an air pervious bag (figure 6: 36) such that at least two sides are air pervious material (col.3, lines 49-55). Thus, it would have been obvious to one having ordinary skill in the art at the time

the invention was made to modify the system of the Aibe reference by including baking soda in an air pervious bag as taught by the Arnold reference so that allowing air to enter but preventing sodium bicarbonate from escaping (col.3, lines 54-55).

With respect to claim 30, the Aibe reference discloses the use of activated carbon as part of the first filter medium and the second filter medium (col.9, lines 64-67).

With respect to claim 31, the Aibe reference teaches the following: the air moving member (figure 12, the lower part of 82 which includes fan 90) has a top portion (serves as a base for the filter member) that is exposed to the outside environment either by having outside air run across it or when removing the filter member with an air inlet therein (figure 12, top portion of the lower part of 82 on which 89 lies directly above), the cartridge (figure 31: 86) sits on the top portion of the air moving member such that the air outlets on the bottom of the cartridge partially in alignment with the air inlet on the air moving member, the air moving member includes a fan (figure 12: 90). Furthermore, the filter member is intrinsically held in place by the gravitational forces (suction of the fan) and the surface topology of the interfacing parts of the filter member and the air-moving member. In addition, the Aibe reference teaches that the location of the fan, the cartridge, the inlets, and the outlets can be varied (col.18, lines 58-68 col.19, lines 1-6).

With respect to claims 38-39, the Aibe reference teaches that the confined space is inside a refrigerator (col.2, lines 50-51) and that a refrigerator intrinsically includes compartments separate from the remainder of the confined space. Thus, in order to

deodorize air in a refrigerator, inserting the device in the compartments or in the main section of the refrigerator is an intrinsic step in achieving such a goal.

With respect to claim 33, the Aibe reference discloses a filter member (figure 23: 196) that is lifted upward from the air-moving member (figure 23: 194) for replacement (col.11, lines 63-65).

5. Claim 27 is rejected under 35 U.S.C. 103(a) as being unpatentable over Aibe et al (U.S.P.N. 5,288,306) in view of Arnold, III (U.S.P.N. 4,995,556) as applied to claim 21 and further in view of Peludat (U.S.P.N. 5,624,311).

With respect to claim 27, the Aibe reference and the Arnold reference fail to teach the combination of sodium bicarbonate filter with a fan; however, the Peludat reference, which is in the art of air treatment, teaches using an air treating component (figure 3:18) that includes baking soda (col.3, lines 55-57) in combination with a fan (figure 2: 18 and 22). Thus, it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the system of the Aibe reference by including baking soda as an air deodorizer as taught by the Peludat reference since baking soda is known as an air deodorizer (col.3, lines 57-60).

6. Claims 32 and 34 are rejected under 35 U.S.C. 103(a) as being unpatentable over Aibe et al (U.S.P.N. 5,288,306) in view of Arnold, III (U.S.P.N. 4,995,556) as applied to claim 31 and further in view of Ganz (U.S.P.N. 2,025,657).

With respect to claims 32 and 34, the Aibe reference and the Arnold reference fail to teach the concept of having complementary hemispherical interfacing parts between the filter member and the air-moving member and the use of a scent-emitting

member. The Ganz reference discloses an emitting member (sachet container) including a scent (i.e., fragrance, col.1, lines 47-49) to be emitted into the atmosphere and also discloses a hemispherical filter member (figure 1:10 and 12) for deodorizing air (col.1, lines 5-6). Thus, It would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the system of the Aibe reference to include a spherical filter member as taught by the Ganz reference since such a shape has an attractive appearance (col.1, lines 16-18).

### ***Response to Arguments***

7. Applicant's arguments filed on 10/14/2005 have been fully considered but they are not persuasive.

On page 11 of the Remarks section, applicant argues that, "Applicants find no teaching by Aibe et al '306, or any other cited reference, for selectively combining any of the elements of these embodiments to result in the presently claimed systems and methods employing both a passive filter member and a forced air filter member including a second filter element." The examiner disagrees since one of ordinary skill in the art would recognize that doubling the sources of deodorants would naturally result in removing undesired odors faster than having a single deodorant source. As a result, it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the method and apparatus of the Aibe reference by utilizing the teachings of the Arnold reference to the Aibe reference in order to maximize the rate of deodorization of air inside refrigerators by combining passive and active deodorizers.

On page 11 of the Remarks section, applicant argues that, "To the contrary, Applicants find no teaching or suggestion in the cited combination of references regarding a system including a passive filter member that is interchangeable with a second filter element of a forced air filter member." The examiner disagrees. The Aibe reference teaches that the detachable passive filter member is interchangeable with the second filter element in the forced air filter member (in col.5, lines 16-18, the Aibe reference teaches that one or multiple activated carbon honeycombs can be used in the deodorizing device thereby the honeycombs can be placed either in devices without fan or in devices with fan as taught in col.18, lines 52-55 and col.11, lines 61-64).

### ***Conclusion***

8. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

9. A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.

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10. Any inquiry concerning this communication or earlier communications from the examiner should be directed to MONZER R. CHORBAJI whose telephone number is (571) 272-1271. The examiner can normally be reached on M-F 6:30-3:00.

11. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, RICHARD D. CRISPINO can be reached on (571) 272-1226. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

12. Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

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